

FIG.

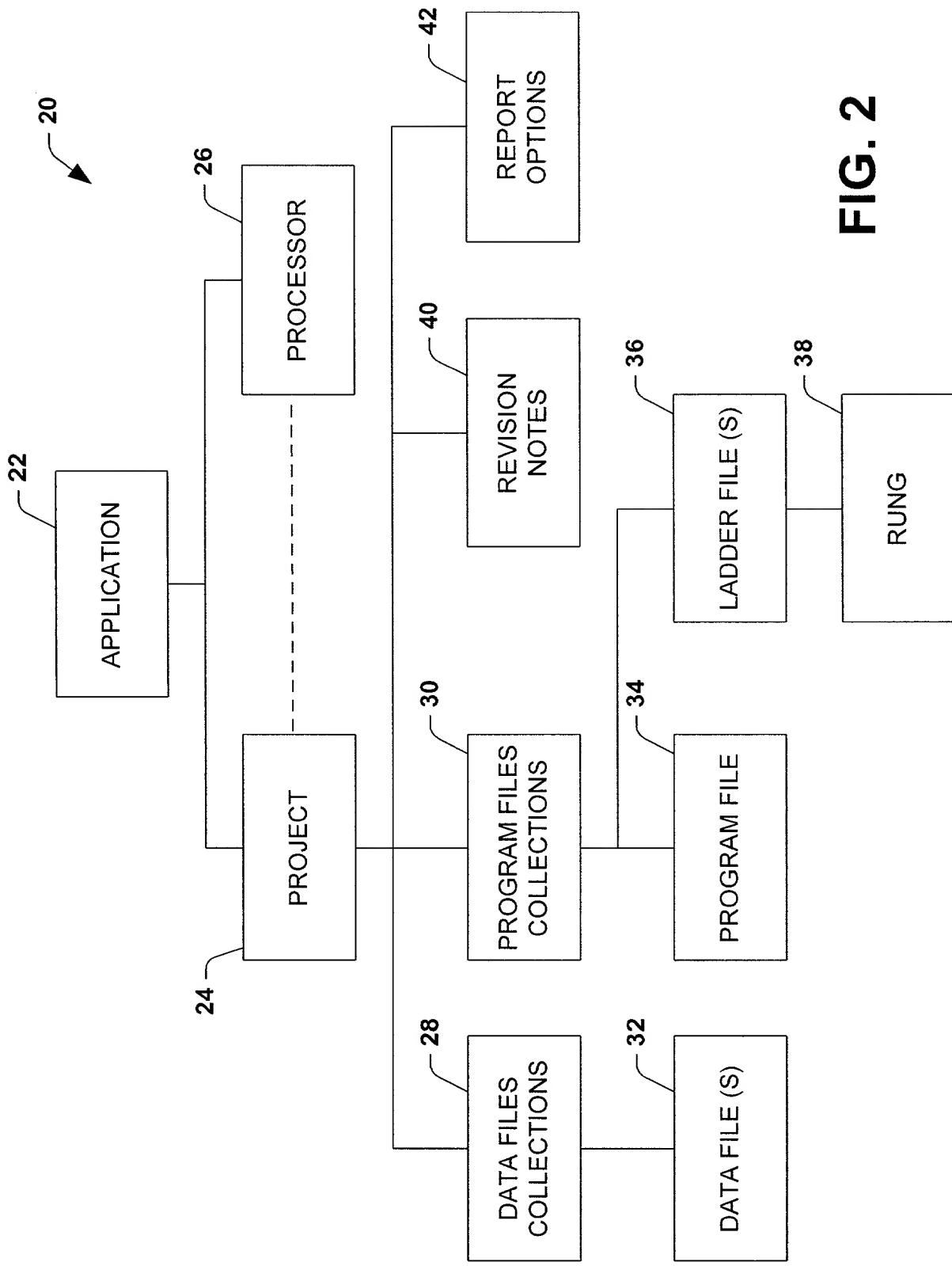
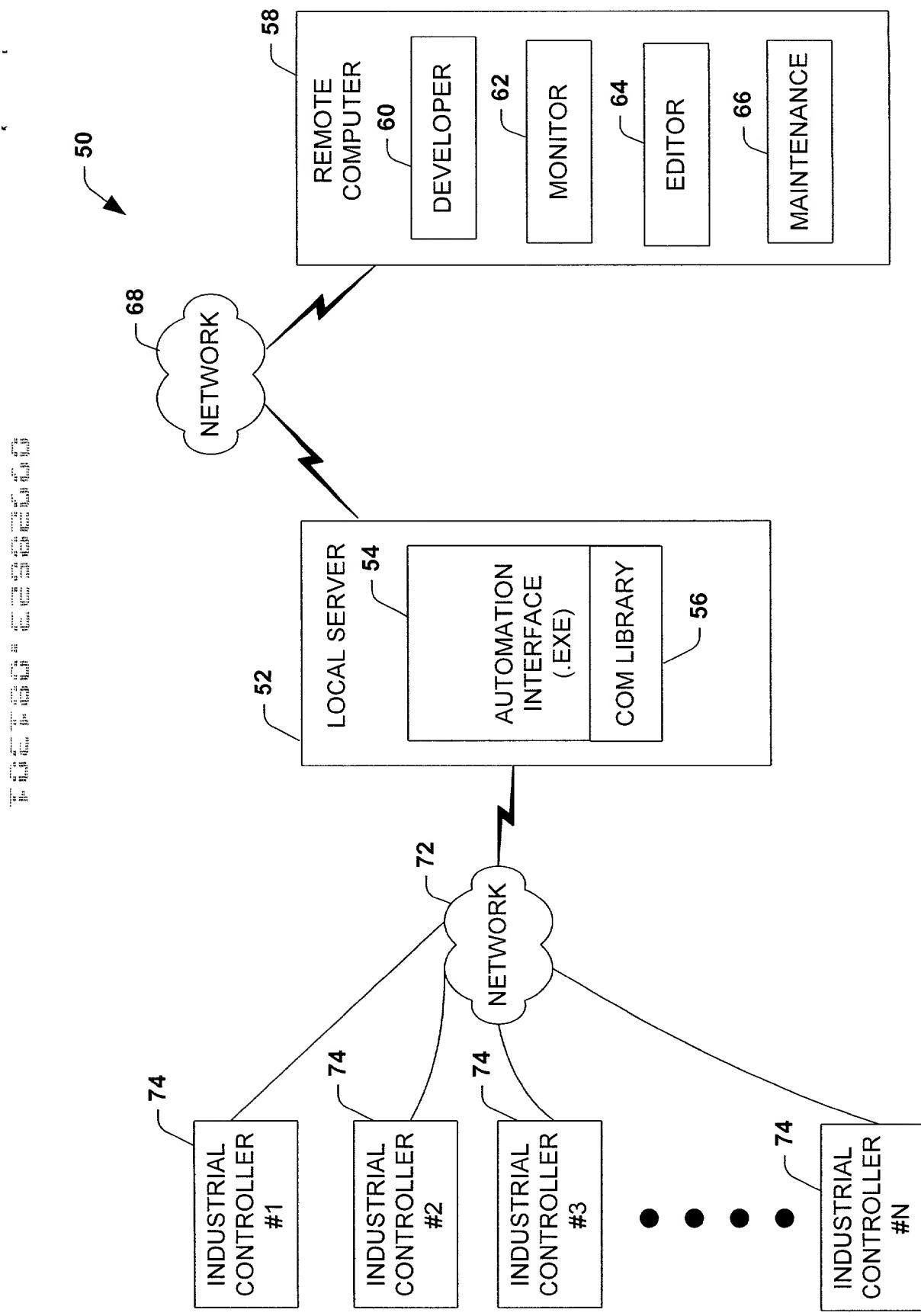


FIG. 2

FIG. 3



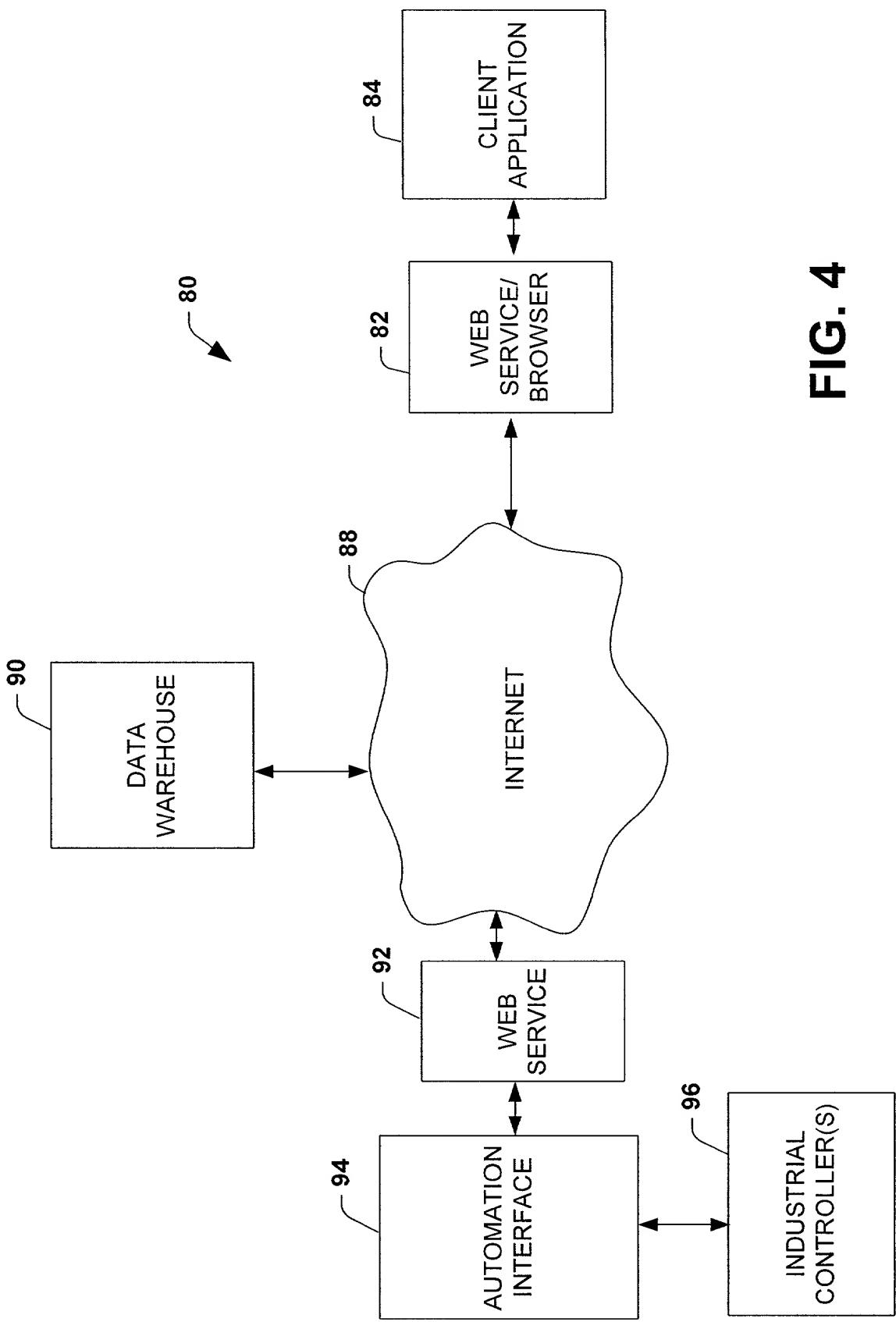


FIG. 4

```
01 Public Sub DownloadAProcessor()
02     Dim g_Application As AutoInterface.Application
03     Dim g_Project As AutoInterface.Project
04     Dim EncodedRouteData As String
05
06     '** start Project and store it in the g_Application object variable
07     Set g_Application = CreateObject("Project.Application")
08
09     '** Declare some variables for clarity.
10     Dim ShowDialog As Boolean
11     Dim UseAutoSave As Boolean
12     Dim IgnorePrompts As Boolean
13     Dim OnlineAction As IgxOnlineAction
14
15     '** Initialize these variables to suitable defaults
16     ShowDialog = False
17     UseAutoSave = False
18     IgnorePrompts = True
19     OnlineAction = IgxGoOffline
20
21     '** Open a project from disk that will be downloaded.
22     Set g_Project = g_Application.FileOpen( "C:\Projects\Upload.rsp", ShowDialog, UseAutoSave)
23
24     '** The communication route to the actual processor that this project represents is set up in the
25     '** application when the project is opened. Get this info out now and save it away for later calls
26     '** to upload this processor.
27     EncodedRouteData = g_Project.EncodedRouteString
28     SaveEncodedRouteData EncodedRouteData
29
30     '** Now download the image to the processor.
31     Dim NoError As Boolean
32     NoError = g_Project.Download(IgnorePrompts, OnlineAction, IgxREMOTEPROG)
33 End Sub
```

FIG. 5

```

01 Public Sub UploadAProcessor()
02     Dim g_Application As AutoInterface.Application
03     Dim g_Project As AutoInterface.Project
04     Dim EncodedRouteData As String
05
06
07
08     '** start Project and store it in the g_Application object variable
09     Set g_Application = CreateObject("Project.Application")
10
11     '** EncodedRouteData holds a string of data that points the project software to the processor on
12     '** the Data Highway+ network it will be performing uploads and downloads on. A function is
13     '** called here to initialize it to a previously obtained value
14
15     InitializeRouteData EncodedRouteData
16
17     '** Now tell project which processor it is to communicate with
18     g_Application.EncodedRouteString = EncodedRouteData
19
20     '** Declare some variables for clarity.
21     Dim IgnorePrompts As Boolean
22     Dim SaveChanges As Boolean
23     Dim AcceptDefaultAction As Boolean
24     Dim UploadAction As IgxUploadDownloadAction
25     Dim OnlineAction As IgxOnlineAction
26     Dim DataBaseAction As IgxSaveAction
27
28     '** Initialize these variables to suitable defaults
29     IgnorePrompts = True
30     SaveChanges = False
31     AcceptDefaultAction = True
32     UploadAction = IgxUploadCurrent
33     OnlineAction = IgxGoOffline
34     DataBaseAction = IgxNoAction
35
36     '** Now make the call that performs the upload. Store the uploaded project object
37     Set g_Project = g_Application.Upload(IgnorePrompts, SaveChanges, UploadAction,
38                                         _OnlineAction)
39
40     '** Now save the uploaded image to disk as a file called Upload.rsp
41     Dim NoError As Boolean
42     NoError = g_Project.SaveAs(IgnorePrompts, AcceptDefaultAction, _
43                               DataBaseAction, "C:\Projects\Upload.rsp")
44 End Sub

```

```

01  Public Sub InsertLadderRung()
02  Dim g_Application As AutoInterface.Application
03  Dim g_Project As AutoInterface.LogixProject
04  Dim g_ProgramFile As AutoInterface.ProgramFile
05  Dim g_LadderFile As AutoInterface.LadderFile
06
07  '** start AutoInterface and store it in the g_Application object variable
08  Set g_Application = CreateObject("AutoInterface.Application")
09
10  '** Declare some variables for clarity.
11  Dim ShowDialog As Boolean
12  Dim UseAutoSave As Boolean
13  Dim IgnorePrompts As Boolean
14  Dim AcceptDefaultAction As Boolean
15  Dim OnlineAction As IgxOnlineAction
16
17  '** Initialize these variables to suitable defaults
18  ShowDialog = False
19  UseAutoSave = False
20  IgnorePrompts = True
21  AcceptDefaultAction = True
22  OnlineAction = IgxGoOffline
23
24  '** Open a project from disk that will be modified.
25  Set g_Project = g_Application.FileOpen("C:\Projects\Upload.rsp", ShowDialog, UseAutoSave)
26
27  '** Obtain the program file object for program file 2. Cast this object to a LadderFile object since
28  '** in this case, program file 2 is also a ladder file
29  Set g_ProgramFile = g_Project.ProgramFiles(2)
30  Set g_LadderFile = g_ProgramFile
31
32  '** Build up a sample rung manually
33  Dim RungString As String
34  RungString = "SOR XIC B3:0/0 OTE B3:0/1 EOR"
35
36  '** Insert this rung into the ladder at position 0
37  g_LadderFile.InsertRungAsAscii 0, RungString
38
39  '** Save the modified project to disk first, then
40  '** download the image to the processor and set the processor to RUN mode.
41  '** Once this is completed, the new rung is executing in the processor.
42  Dim NoError As Boolean
43  NoError = g_Project.Save(IgnorePrompts, AcceptDefaultAction)
44  NoError = g_Project.Download(IgnorePrompts, OnlineAction, IgxREMOTERUN)
45 End Sub

```

FIG. 7

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<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>		
Application Object		
<input type="button" value="Start AUTOINF"/>	<input type="button" value="Upload"/>	<input type="button" value="Stop AUTOINF"/>
<input type="button" value="GetActiveProject"/>		
<hr/>		
Project Object		
<input type="button" value="Save"/>	<input type="button" value="Download"/>	
Project FullName Property		
<input type="text"/>		
Project name Property		
<input type="text"/>		
<hr/>		
Processor Object		
Processor Node		
<input type="text"/>		
<input type="button" value="Enable Forces"/>		
<hr/>		
Program Files Collection		
Program File	<input type="text"/>	<input type="button" value="Add"/>
	<input type="button" value="Remove"/>	<input type="button" value="Get"/>
For ProgramFile		
<hr/>		
Program File		
Type	<input type="text"/>	Name <input type="text"/>
<input type="button" value="Convert to LadderFile"/>		
<hr/>		
LadderFile		
Rung Number	Rung Ascii	
<input type="text"/>	<input type="text"/>	<input type="button" value="Add Rung"/>
<hr/>		
Rung		
Rung Number	<input type="text"/>	<input type="button" value="Get"/>
Rung Title	<input type="text"/>	
Rung Component	<input type="text"/>	

FIG. 8

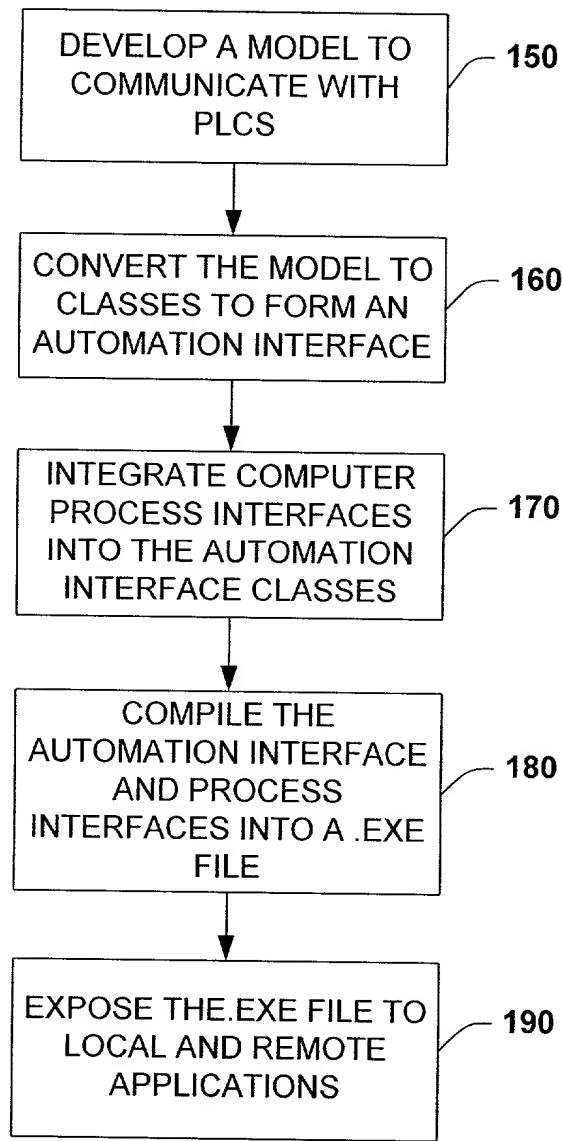


FIG. 9

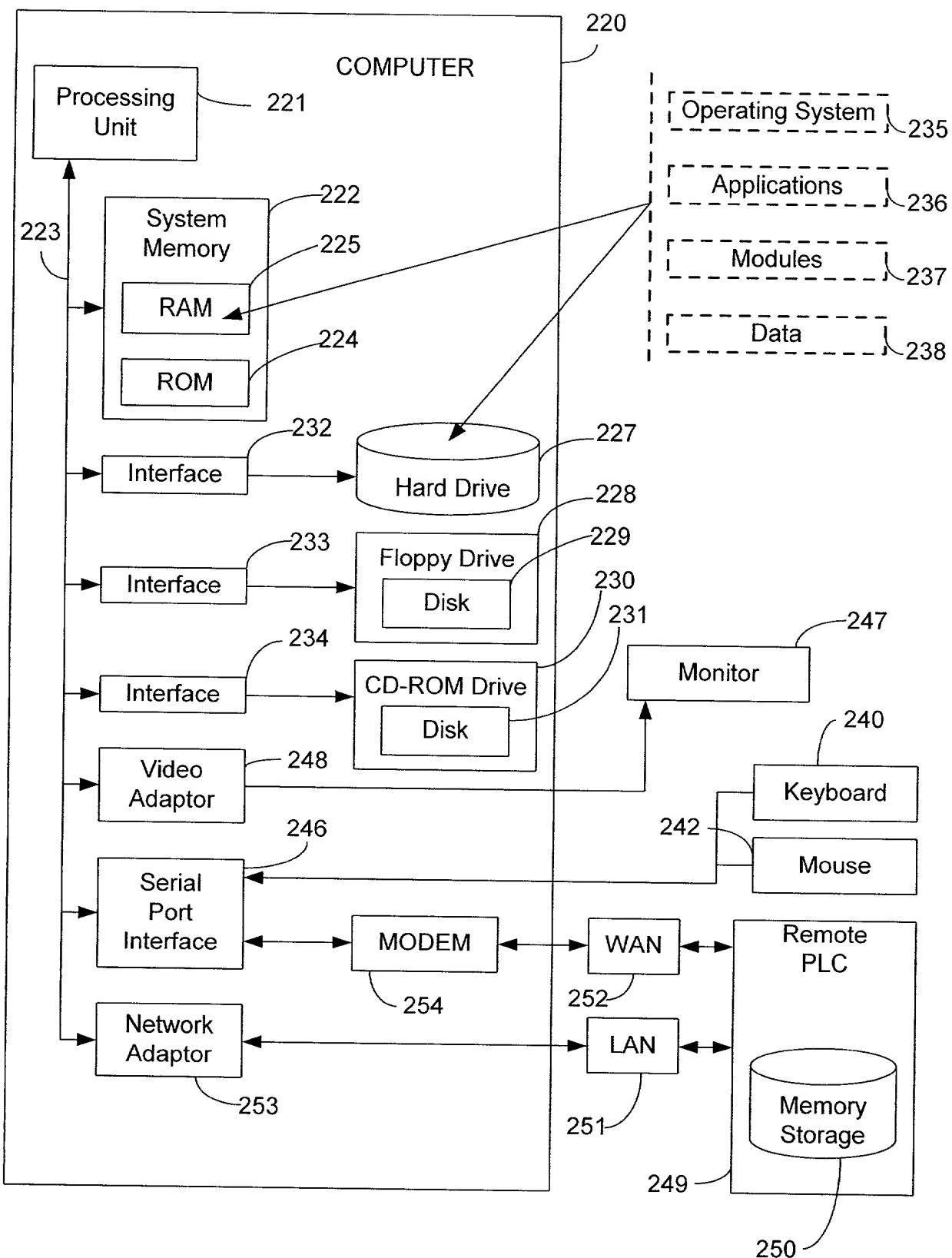


FIG. 10